

## **ABSTRACT**

### **METHOD AND APPARATUS FOR AN X-DSL MODEM SUPPORTING MULTIPLE X-DSL LINE CODES**

5           A method and apparatus for an X-DSL modem supporting multiple X-DSL line  
codes, protocols for a plurality of channels is disclosed. Each channel is packetized and  
each packet includes control information for controlling the performance of the  
components/modules on the transmit and receive path. Further flexibility is derived from an  
architecture which incorporates discrete and shared modules on the transmit path and the  
10   receive path. The transmit path and receive path modules are collectively controlled by  
control information in selected ones of the packets. This control information is used by  
selected ones of the modules to appropriately process each channel in conformance with the  
corresponding X-DSL protocol, operating on each channel's packets at an appropriate rate,  
and protocol for the channel. The DSP exhibits a favorable form factor, and flexibility as to  
15   protocols and line codes, and numbers of channels supported.